ATMOSPHERIC PRESSURE OVER POLAND, EUROPE, AND THE GLOBE.

A companion volume to that containing Gorczyński's study of the distribution of temperature over Poland. Europe, and the entire globe, is provided by the same author's work, along similar lines, on the atmospheric pressure.[1]

A discussion of the diurnal variation at stations in Poland, and of the formation of true means, is followed by the consideration of some exceptionally long and homogenous records of pressure at several Polish stations. Formulae for the reduction of pressure to sea-level are discussed and simplified tables constructed. Means and departures from the means, 1851–1900, for 800 stations in Europe, and for stations in other parts of the world, are tabulated. Here the author's enthusiasm carries him away, as has been pointed out in a review by C. E. P. Brooks (*Quar. Jour. Roy. Met'l. Soc.*, Apr., 1920, 46, 218:) "In the case of Scotland, alone, for example, he has adopted one hundred and fifty stations direct from a work by the late Dr. A. Buchan. These stations, many of which must be based on very short periods, were corrected by Buchan to the forty-year period 1856–1895, and recorrected by Gorczynski, using in some cases different standard stations for comparison, to the period 1851–1900. One can but think that one-tenth the number of stations in Scotland, well chosen and well distributed, would have been more useful for map drawing. The same procedure has been applied to records for other countries. The method of reducing a short series to a long one by differences is admirable in itself, but its repeated application to the same set of figures must be condemned." In addition the means calculated for certain isolated stations must often be regarded as doubtful.

Mean and interdiurnal variability, general atmospheric circulation, correlation as applied to studies of pressure and temperature, etc., are treated. The volume is closed by 54 charts, showing the monthly and annual isobars of Poland, Europe, and the world. These are undoubtedly the best now available for Poland and central Europe, joining onto Angot's for the same period, 1851–1900, in France and adjacent regions.—*E. W. W.*

[1] Władysław Gorczyński, O Cisnieniu Powietrza w Polsce i w Europie (Pression atmospherique en Pologne et en Europe). Warsaw, 1917.

OCEANOGRAPHIC AND METEOROLOGICAL OBSERVATIONS IN THE ATLANTIC OCEAN, DECEMBER, JANUARY, FEBRUARY, 1870–1914.[1]

The first requirement in making studies of the variations of ocean currents, water temperatures, air temperatures, pressures and winds, is a reliable set of normal values as a basis of comparison. The Royal Netherlands Meteorological Institute which has always been a leader in the publication of marine data has now provided an excellent series of charts which may be used as a firm foundation for much needed studies of ocean temperature departures and their relations to air temperature, pressure, and wind departures from the normal.[2]

The preface by Director E. van Everdingen is as follows:[3]

"Although observations made during the last 70 years on board Dutch vessels in the North and South Atlantic have been often utilized for publications on oceanography and marine meteorology, they have not been treated in accordance with the requirements of modern science and navigation.

"Only the work dealing with observations made in the region of the Guinea current (Pub. No. 95, 1904) can be considered as being profound from both the theoretical and the practical point of view.

"Yet this publication gives only for a small part of the ocean a summary of the movements of the atmosphere and of the ocean, the mean values of the atmospheric pressure, and of the temperatures of the air and the water.

"Other existing works date for the most part from the days of sailing ships and retain only a very special value.

"In addition, the number of observations at our disposal has enormously increased, and there can be computed much more exactly the mean values of the atmospheric pressure, the temperatures of the air and the water, and the direction and force of the wind and the currents for all regions of the ocean between 50 degrees north and 50 degrees south latitude, with much profit to science as well as to navigation.

"With the completion of the great work on the oceanography and marine meteorology of the Indian Ocean (Pub. No. 104), there has been undertaken a similar work for the Atlantic, of which the first part herewith appears.

"For the most part, the observations made on board Dutch vessels during the years 1870 to 1914 have served as the basis of the work; in addition, thanks to the greatly appreciated collaboration of the "Deutsche Seewarte" at Hamburg and of the "Meteorological Office" at London, it was possible to utilize observations of the wind and the currents in regions where Dutch observations are scarce.

"Abnormal conditions made it impossible to publish simultaneously the atlas and also the tables which contain all the numerical data. These tables are in press and will appear in 1919. * * *"

The following table [abridged] indicates the number of observations of each element:

	December.	January.	February.
Currents	22,021	20,762	18,657
Wind	116,082	105,652	95,965
Atmospheric pressure	105,867	95,043	87,097
Temperature of the air	108,164	97,560	89,392
Temperature of water	106,417	95,564	86,595
Cloudiness	113,955	102,876	94,794

Of the total number of observations of currents, 7,020 and 3,441, or 11.4 per cent and 5.6 per cent, were respectively, furnished by the Germans and the English; in addition, 7,020 observations of the wind, or 2.2 per cent of the total, were furnished by the Deutsche Seewarte.

Valuable navigational information has been added on the reverse of the charts by the assistant director, M. P. H. Gallé, who, in collaboration with the director, Dr. J. P. van der Stok, has directed the work.

There are eight charts for each month, as follows:

1. Currents, by 5-degree squares the frequency and mean velocity of surface water movement in each of 16 directions.

2. Winds, same as for currents, except that only eight directions are covered.

3. Currents, general circulation of the surface water, by 2-degree squares the resultant frequency and mean velocity to the nearest one of the 32 points of the compass.

4. General circulation of the air, same as for the currents.

[1] Oceanographische en meteorologische waarnemingen in den Atlantischen Ocean December, Januari, Februari 1870-1914. Kaarten. Koninklijk Nederlandsch Meteorologisch Instituut No. 110. 24 plates. 44½ x 51 cm.
[2] Cf. MONTHLY WEATHER REVIEW, Nov., 1918, 46: 510-512.
[3] Translated from the French by E. W. Woolard.

5. Mean sea-level pressures, by 2-degree squares, to the nearest tenth of a millimeter. Isobars for every 2.5 millimeters.

6. Air temperatures, by 2-degree squares to the nearest tenth of a degree centigrade. Isotherms for every 5 degrees centigrade.

7. Ocean surface temperatures, same as for air temperatures.

8. Routes, trajectories of cyclones, limits of fog, ice, the trades and the monsoons (with a page of discussion in Dutch). In connection with discussions in Dutch there are additional charts in the text showing the frequency of fog in the northwestern North Atlantic, a storm weather map of the North Atlantic, and the frequency of gales in the Atlantic.—*C. F. B.*

NOTES, ABSTRACTS, AND REVIEWS.

RETIREMENT OF MR. HENRY E. WILLIAMS.

Mr. Henry E. Williams, some time Chief of the Forecast Division, was among the first employees of the United States Weather Bureau on duty in Washington, D. C., to be placed on the retired list, August 20, 1920.

Mr. Williams is a veteran of the Civil War, having had three years service as first sergeant in the 17th Connecticut Volunteers. Shortly after the close of the war he enlisted in the Regular Army. He received his discharge in 1876, and immediately enlisted in the United States Army Signal Corps. His combined military and civil service aggregates 52 years and 4 months, 44 of which were spent in the Weather Service.

The greater portion of Mr. Williams's tour of duty in the meteorological service was spent in the Forecast Division of the central office in Washington. While not himself a forecaster, being chiefly concerned with administrative matters in connection with the division, he had the unique experience of a close-up view of the forecasting activities of the Army Signal Corps and the civilian organization—the United States Weather Bureau—that succeeded it in 1891.

He was assistant chief of the Weather Bureau from July 1, 1903 to June 30, 1912. The position in which he was best known to the men of the service was however that of assistant instructor at Fort Myer, Va., during the eighties. It was his custom in making the daily trip between Georgetown and Fort Myer to ride a fine old gray mule. In the minds of those who attended the school, the recollection of Instructor Williams astride the gray mule continues to be one of the most highly cherished landmarks of the time.

Mr. Williams is one of the best known and highly esteemed men of the Weather Service. His associates unite in congratulating him upon rounding out more than a half century of useful service to his country.—*A. J. Henry.*

Dr. Jesse C. Green, 1817–1920.

Dr. Jesse C. Green, cooperative observer at West Chester, Pa., died on July 26, 1920, at the age of 103 years. His death was caused by an accident, a fall from a step ladder.

Dr. Green began keeping weather records at West Chester in January, 1855, and continued without interruption until the time of the accident that caused his death. It is believed that this individual record for more than 66 years is unparalleled in this country, if not in the world.

It was a cherished desire of Dr. Green's that the Weather Bureau should publish his records as a separate pamphlet, and they were compiled for that purpose, but unfortunately the available funds would not permit of the expense, and his hopes were never realized.—*George S. Bliss.*

DR. G. C. SIMPSON BECOMES DIRECTOR OF THE BRITISH METEOROLOGICAL OFFICE.

[Reprinted from Science, London, August 5, 1920, p. 721.]

Dr. G. C. Simpson, F. R. S., Meteorologist to the Government of India, has been appointed Director of the Meteorological Office as successor to Sir Napier Shaw, who retires on reaching the age limit after brilliant pioneer service. Dr. Simpson was meteorologist and physicist to the British Antarctic Expedition, 1900–1913, and served on the Indian Munitions Board from 1917 to 1919. In 1905 he was appointed a Scientific Assistant in the Meteorological Office, and in 1906 joined the staff of the Indian Meteorological Department. He is the author of a number of papers of scientific importance, including one on the electricity of rain and its origin in thunderstorms, published in the Philosophical Transactions in 1909. Only last year Dr. Simpson completed an elaborate discussion of the meteorological work of the British Antarctic Expedition, 1910–1913. As successor to Sir Napier Shaw his appointment promises a continuation of progress along lines which will advance meteorological science and maintain the high position which the British Meteorological Office now occupies through its work in recent years.

COOPERATION IN THE INVESTIGATION OF GEOPHYSICAL PROBLEMS IN HIGH LATITUDES.

[Reprinted from The Meteorological Magazine, London, July, 1920, vol. 55, pp. 121–122.]

The recent visit of Captain Roald Amundsen to Berings Strait has again directed general attention to his projected voyage across the Polar Sea. In spite of the difficulties of organizing international cooperation at the present time, it is hoped that a large number of stations will be provided at various points in high latitudes so that observations of meteorological and magnetic phenomena, and especially of the aurora borealis, may be available for comparison with those of Amundsen's party. The Meteorological Office is organizing an observing station in the Shetland Islands for the purpose.

A publication entitled "Various Papers on the Projected Cooperation with Roald Amundsen's North Polar Expedition" has been circulated from Christiania by the Norwegian Geophysical Commission. It contains memoirs on the importance of various parts of the work, and also practical suggestions with regard to apparatus and methods. The authors are Th. Hesselberg, O. Krogness, and Carl Størmer.

Of special interest in connection with the projected observations is the memoir by L. Vegard and O. Krogness on "The Position in Space of the Aurora Polaris," issued by the same Commission. The memoir is illustrated by no less than 434 pairs of photographs from which the height of the aurora has been determined on as many occasions. Even on the small scale of the reproductions